



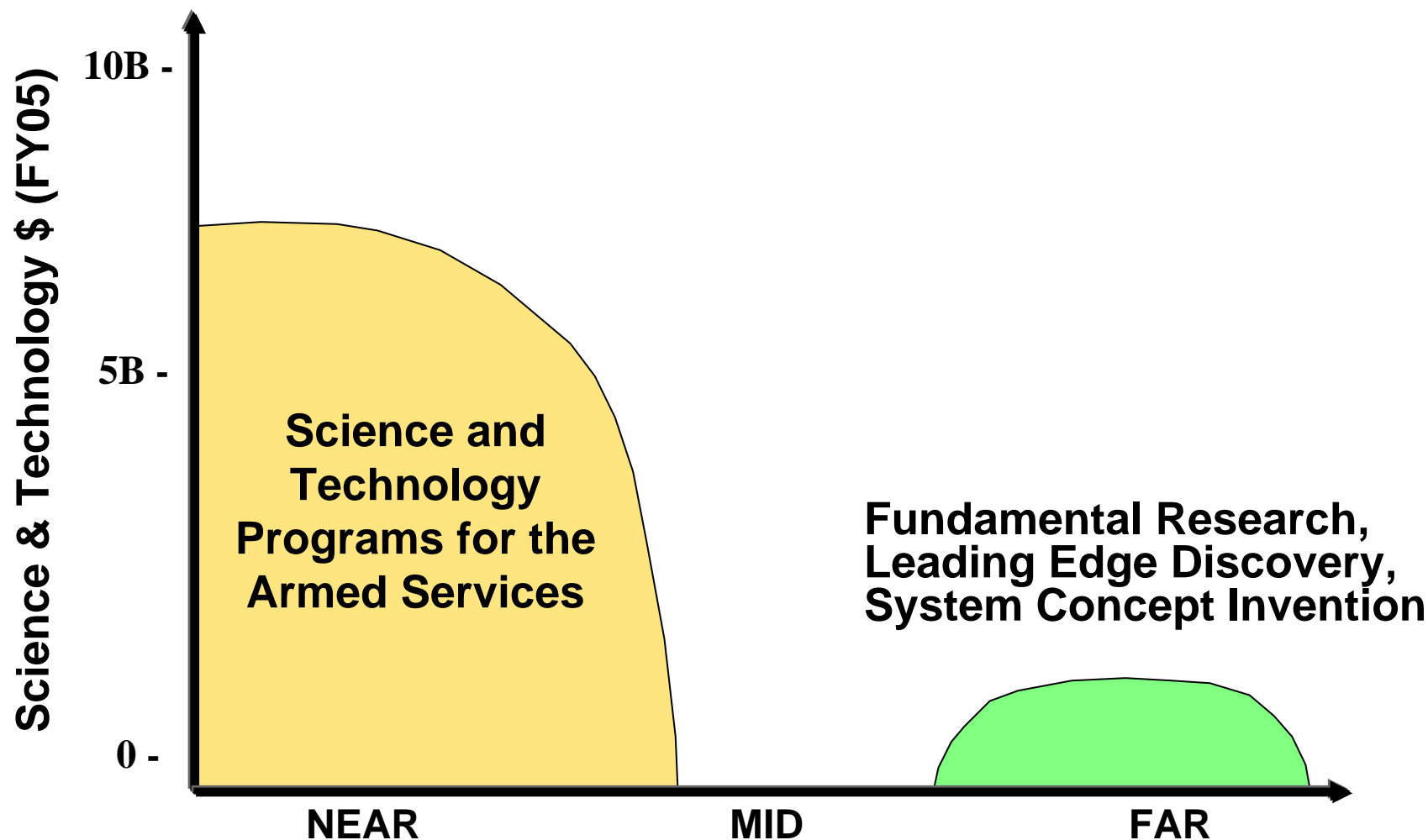
Defense Advanced Research Projects Agency

Grand Challenge 2005

Dr. Anthony J. Tether
DARPA Director

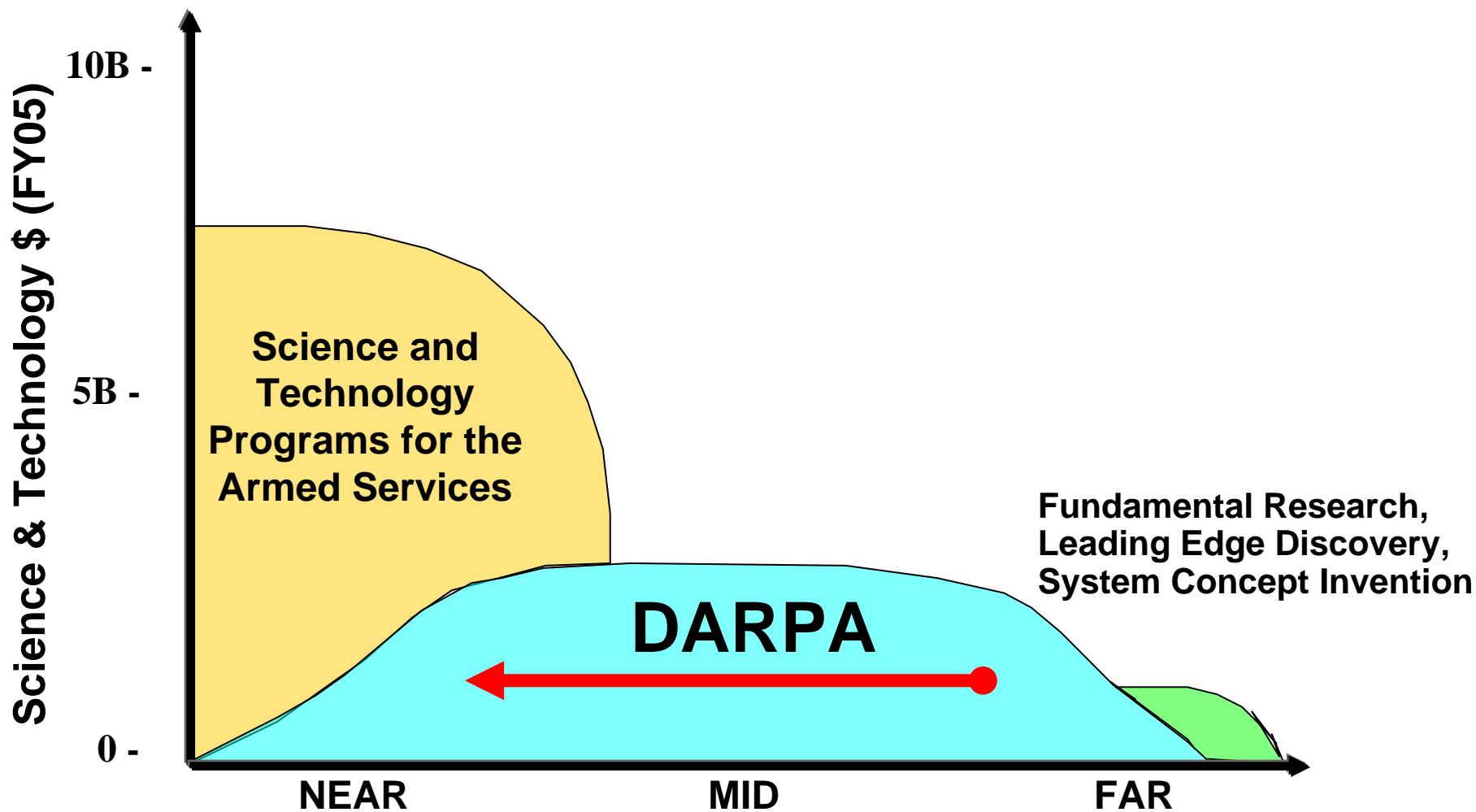


DARPA Role in Science and Technology



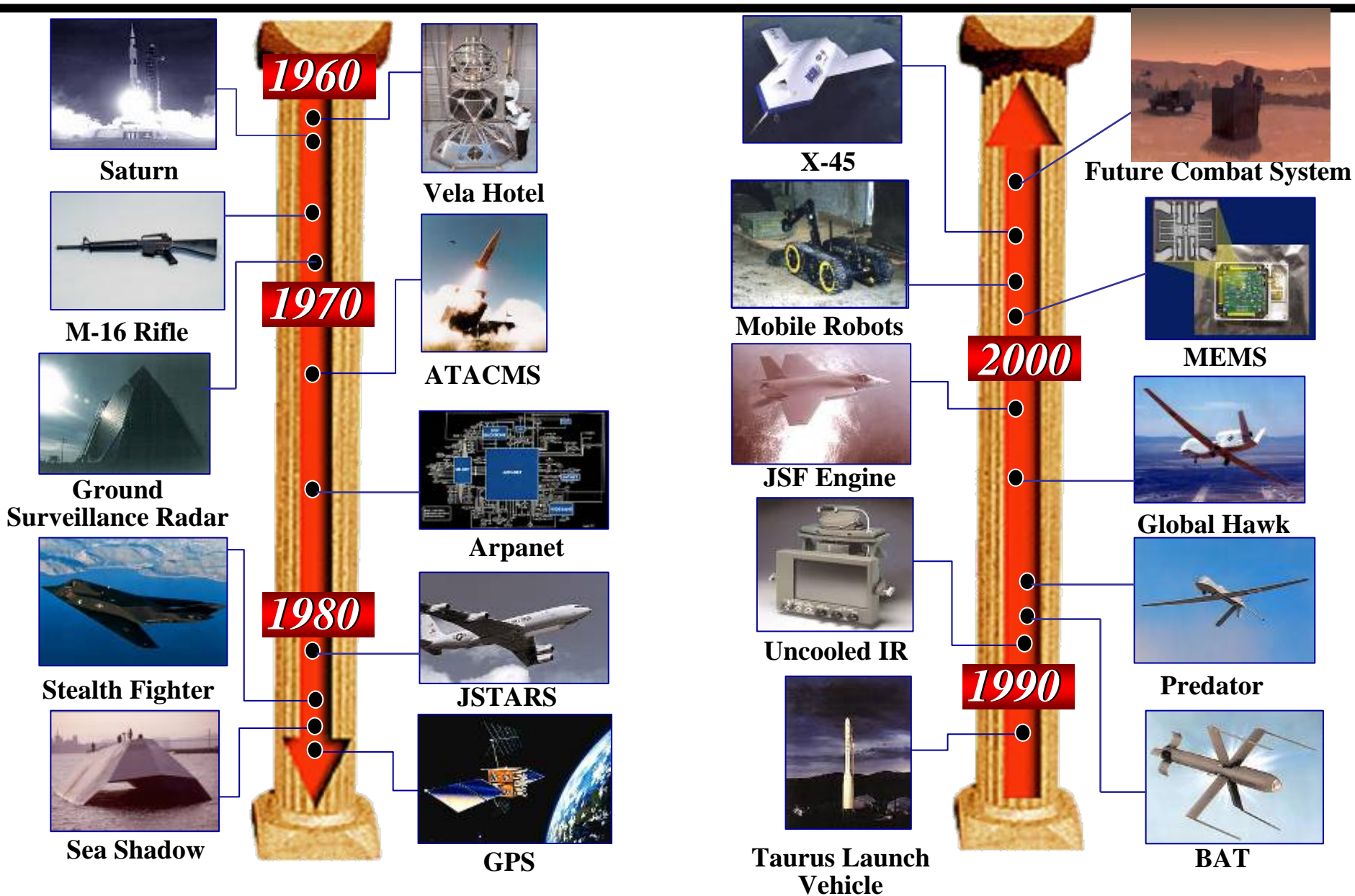


DARPA Role in Science and Technology



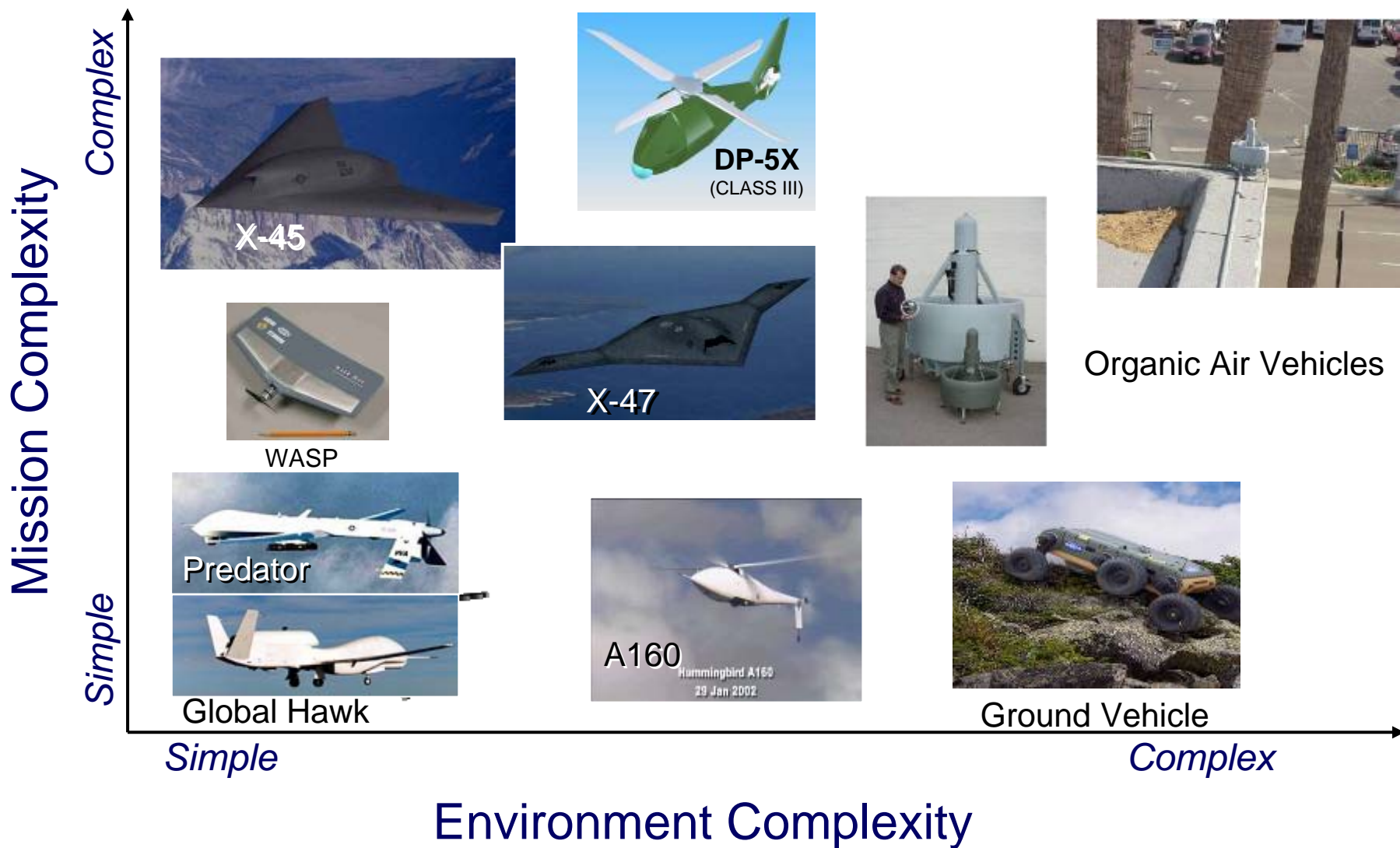


DARPA Accomplishments



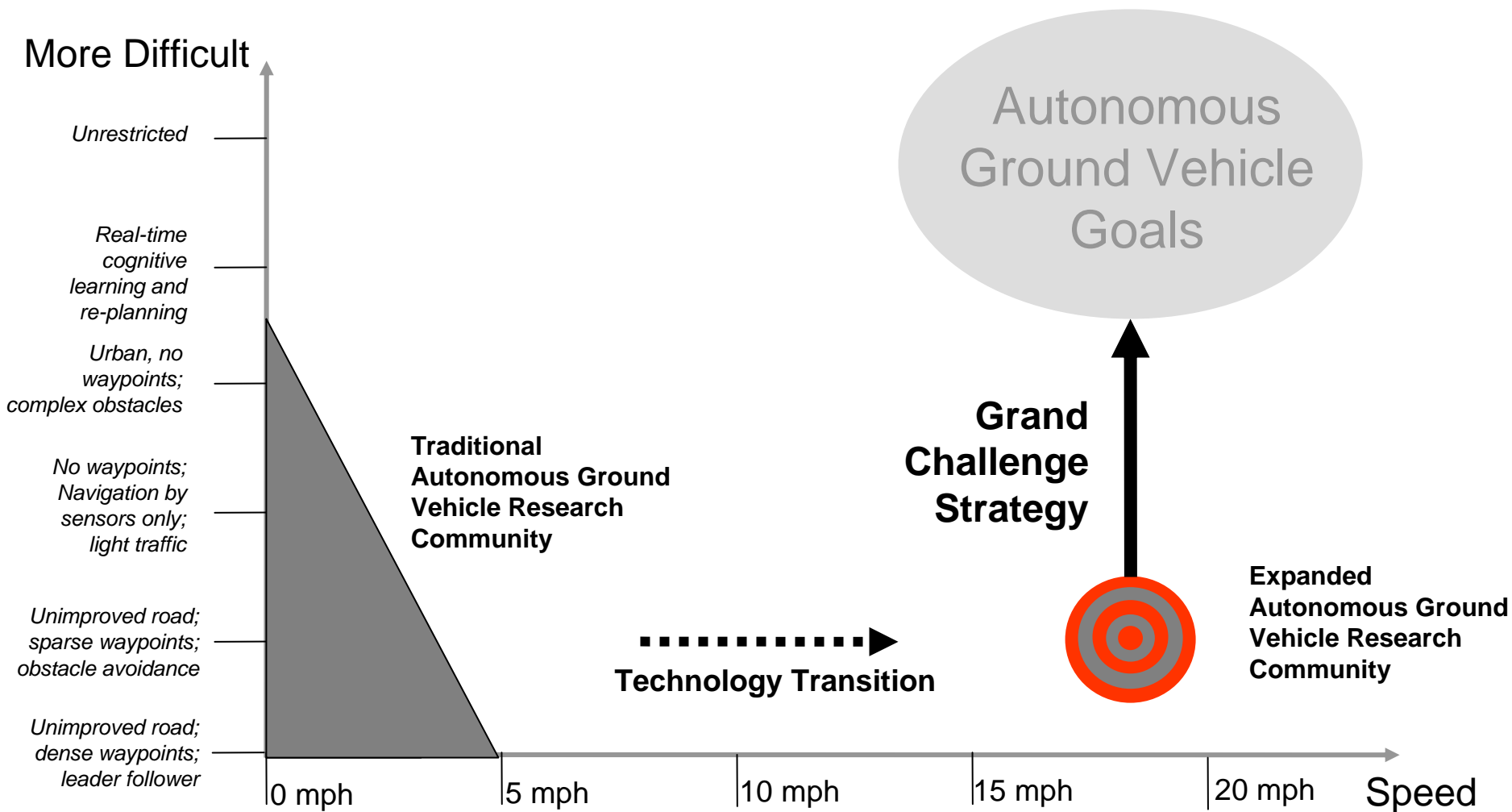


Networked Manned and Unmanned Systems





DARPA Grand Challenge





The 2004 Grand Challenge

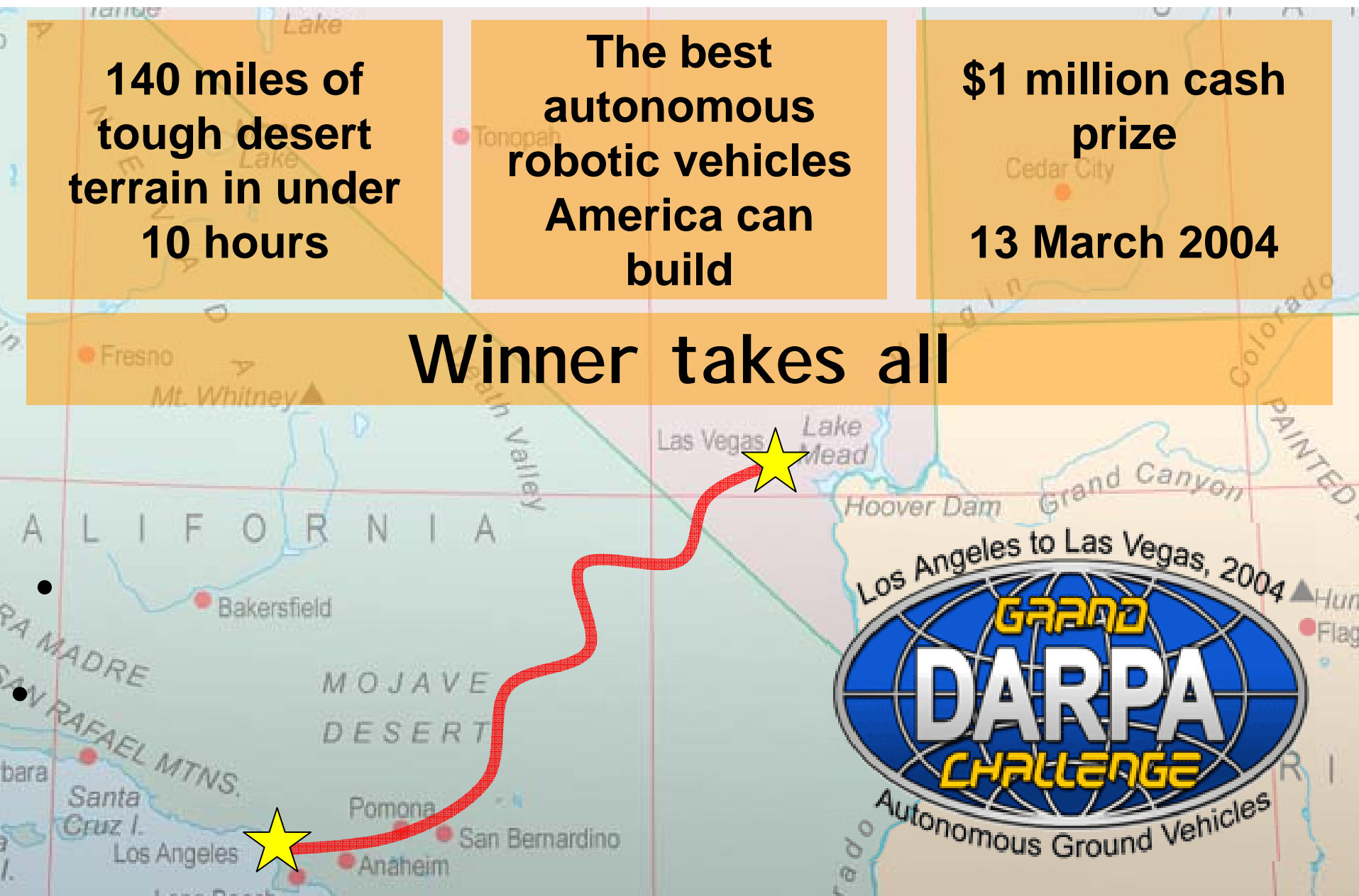
**140 miles of
tough desert
terrain in under
10 hours**

**The best
autonomous
robotic vehicles
America can
build**

**\$1 million cash
prize**

13 March 2004

Winner takes all





106 Applicants

October 2003



106 Applications

Not shown: Los Buitres – Argentina; Creatnz – New Zealand



2004 Grand Challenge

Barstow, California
March 13, 2004





2005 Grand Challenge

**Miles of some of
the toughest
terrain in the
world**

**The best
autonomous
robotic vehicles
America can
build**

**\$2 million cash
prize
8 October 2005**

Winner takes all

Prize Doubled to \$2 million

195 Applicants

February 2005



Site Visits

Test Course

- 8 meters wide
- 200 meters long
- 11 gates
- Obstacles





The Grand Challenge

43 Semifinalists



43 teams from 15 states

1 high school team / 17 university teams

● 2004 Grand Challenge Team
● 2005 Grand Challenge New Entry



National Qualification Event

***California Speedway,
Ontario California
September 27 – October 5, 2005***





National Qualification Event Track



Start Chute



Tunnel



Tank Trap



National Qualification Event Video

The 23 Grand Challenge 2005 Finalists



Axion Racing
Westlake
Village, CA



Desert Buckeyes
Columbus, OH



**The MITRE
Meteorites**
McLean, VA



**SciAutonics/
Auburn Engineering**
Thousand Oaks, CA



Team CajunBot
Lafayette, LA



Team ENSCO
Springfield, VA



MonsterMoto
Cedar Park, TX



Stanford Racing Team
Stanford, CA



Team Caltech
Pasadena, CA



**The Golem Group,
UCLA**
Santa Monica, CA



Mojávaton
Grand
Junction,
CO



Team TerraMax
Oshkosh, WI



CIMAR
Gainesville, FL



Gray Team
Metairie, LA



**Princeton
University**
Princeton, New
Jersey



**Virginia Tech
Team Rocky**
Blacksburg, VA



Team Cornell
Ithaca, NY



Insight Racing
Cary, NC



Red Team
Pittsburgh, PA



Team DAD
Digital Auto Drive
Morgan Hill, CA



**Intelligent Vehicle
Safety
Technologies I**
Littleton, CO



Red Team Too
Pittsburgh, PA



**Virginia Tech
Grand
Challenge
Team**
Blacksburg, VA



Start Line October 8, 2005 - 6:40 AM





The Course

Narrow Underpass



Long Tunnels



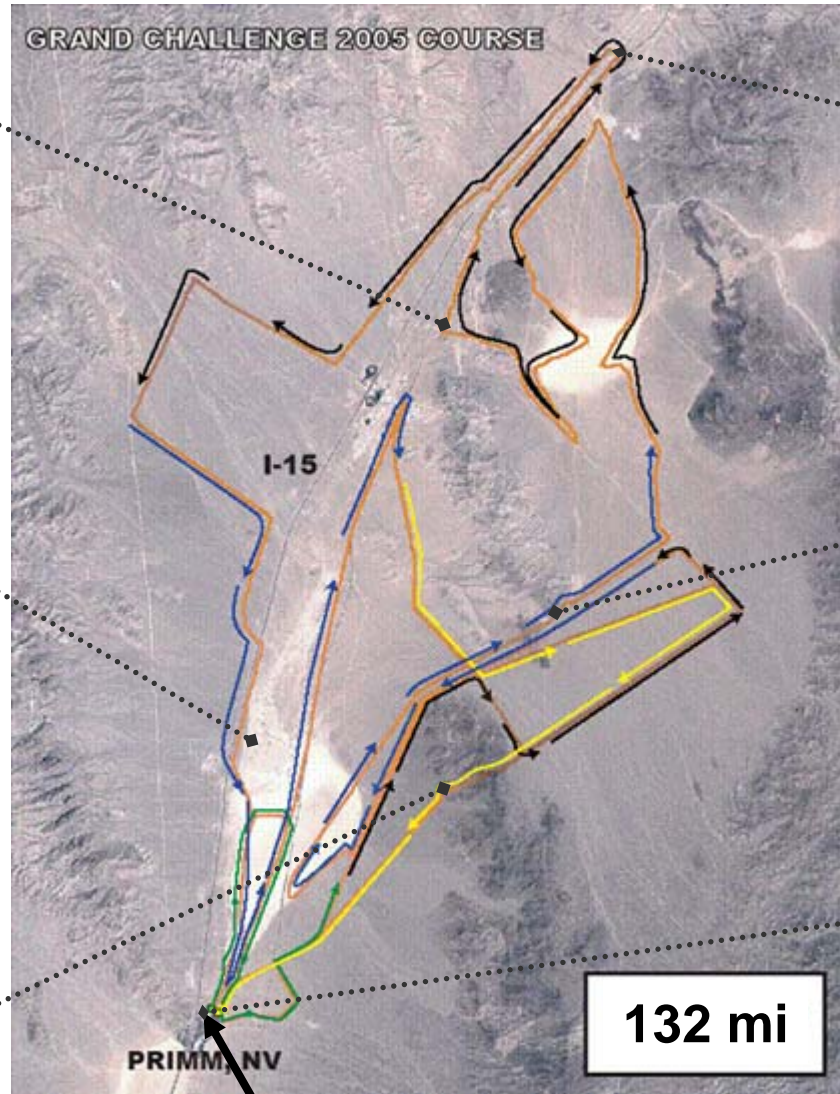
Lake Beds



Narrow Gates



Rough Roads



Start/Finish

Close Obstacles





Grand Challenge Video



2005 Grand Challenge Results

STATUS BOARD

Final Results as of 10/9/2005



ID	TEAM	TIME	DISTANCE	
3	Stanford Racing Team	6h 53m	131.70	
19	Red Team	7h 4m	131.70	
25	Red Team Too	7h 14m	131.70	
30	Gray Team	7h 30m	131.70	
21	Team TerraMax	12h 51m	131.70	
28	Team ENSCO	DNF	81.20	
23	Axion Racing	DNF	66.20	
38	Virginia Tech Grand Challenge	DNF	43.50	
9	Virginia Tech Team Rocky	DNF	39.40	
10	Desert Buckeyes	DNF	29.00	
4	Team DAD (Digital Auto Drive)	DNF	26.20	
14	Insight Racing	DNF	25.60	
1	Mojavaton	DNF	23.00	
18	The Golem Group / UCLA	DNF	22.40	
24	Team CajunBot	DNF	17.20	
20	SciAutonics/Auburn Engineer	DNF	15.90	
15	Intelligent Vehicle Safety Tech	DNF	14.00	
8	CIMAR	DNF	13.60	
41	Princeton University	DNF	9.50	
26	Team Cornell	DNF	8.90	
2	Team Caltech	DNF	8.00	
16	MonsterMoto	DNF	7.20	
37	The MITRE Meteorites	DNF	0.73	

2004 Distance



Stanley



Vehicle	Stanley
Team	Stanford Racing Team
Hometown	Palo Alto, California
Team Leader	Michael Montemerlo
Finishing time	6h 53m (19.2 mph)





Sandstorm



Vehicle

Sandstorm

Team

Red Team

Hometown

Pittsburgh, Pennsylvania

Team Leader

Red Whittaker

Finishing time

7h 04m (18.7 mph)





H1ghlander



Vehicle	H1ghlander
Team	Red Team Too
Hometown	Pittsburgh, Pennsylvania
Team Leader	Kevin Peterson
Finishing time	7h 14m (18.3 mph)





KAT-5



Vehicle

KAT-5

Team

Gray Team

Hometown

Metairie, Louisiana

Team Leader

Eric Gray

Finishing time

7h 30m (17.6 mph)





TerraMax



Vehicle	TerraMax
Team	Team TerraMax
Hometown	Oshkosh, Wisconsin
Team Leader	Jim Fravert
Finishing time	12h 51m (10.3 mph)





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